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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/713,309

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Victor A. Quattrini

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BEAUCHAINE, MARK J

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/713,309	Applicant(s) QUATTRINI ET AL.	
	Examiner MARK J. BEAUCHAINE	Art Unit 3653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

Receipt of the Applicant's amendment to claim 10 filed 18 April 2008 to overcome the ambiguity rejection of Office action dated 15 January 2008 is acknowledged. Said rejection is hereby withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-8 and 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patent Application Publication Number US 2004/0045787 A1 by Zimmerman ("Zimmerman") in view of Patent Number 4,371,783 by Grimmell et al ("Grimmell"). The processing apparatus 5 disclosed by Zimmerman comprises coin presence sensor 5 comprising at least one sensor 11 mounted on one side of receptacle 2 (see Figure 6), said at least one sensor further comprising a light transmitting device for transmitting light into said receptacle, wherein said light is reflected off said coins when present, and a light receiving device for receiving the

reflected light when coins are present (see paragraph 0037). Said light receiving device generates a first signal when coins are present and a second signal when coins are not present (see paragraphs 0040 and 0043 and Figure 11).

Zimmerman further discloses a coin supply arranged in a stack of coins and said sensor being positioned at a predetermined height to indicate the presence of absence of a coin at said predetermined height. Said predetermined height is correlated to a predetermined value of coin (see paragraph 0034, lines 8-12), and is at the top, the bottom, or in between the top and bottom of a coin stack (see Figure 6) to determine filled, near depletion and depletion states, respectively.

Zimmerman fails to disclose a mask and access port. Grimmell teaches a sensor comprising light transmitting device 2a, light receiving device 5 and mask 2 mounted on said sensor via an access port and having apertures constructed therein aligned with said transmitting and receiving devices (see Figure 1) to isolate the receiving device from exposure to transmitted light prior to reflection for the purpose of preventing unwanted light from distorting article detection signals produced by the sensor. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the mask of Grimmell into the sensor of Zimmerman for the purpose of preventing unwanted light from distorting article detection signals produced by the sensor.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of Grimmell as applied to claim 1 above, and further in view of

Patent Number 5,755,618 by Mothwurf ("Mothwurf"). Zimmerman fails to disclose a photodiode transmitter, a phototransistor receptor and an access port. Mothwurf teaches coin sensors 641 (see Figures 2 and 4) comprising photodiode transmitters and phototransistor receptors (see claims 3 and 4, respectively) for the purpose of providing a means of detecting the presence or absence of coins within a receptacle. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the photodiode transmitters and phototransistor receptors of Mothwurf into the sensor of Zimmerman/Grimmell for the purpose of providing a means of detecting the presence or absence of coins within a receptacle.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman in view of Grimmell as applied to claim 1 above, and further in view of Patent Number 4,746,319 by Zwieg et al ("Zwieg"). Zimmerman/Grimmell fails to disclose said first and second signals being different output voltages. Zwieg teaches coin-detecting light sensor 37 generating first and second signals that are different voltage outputs (see column 5, lines 3-45) for the purpose of providing a basis of detecting the presence of a coin. It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the first and second signals of Zwieg into the apparatus of Zimmerman/Grimmell for the purpose of providing a basis of detecting the presence of a coin.

Claim 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Patent Number US 6,371,845 B1 by Ishida et al ("Ishida") in view of Zimmerman. The coin dispensing apparatus disclosed by Ishida is operated by performing the steps comprising establishing a selected height of stack of coins 41 in receptacle 4 correlated to a predetermined number of coins in said stack (see Figures 2 and 3), sensing the presence of said coins at said selected height (via sensor 23) and generating a signal in response thereto (see column 6, lines 47-56), storing the number of coins contained in a full stack of coins in response to said sensor signal (via RAM 13), and counting the number of dispensing operations and subtracting said number of dispensing operations from said stored number of coins in a stack to determine the number of coins remaining in the stack (see Figure 5).

Ishida fails to disclose the step of sensing the presence of coins at a selected height at any level within said receptacle. Zimmerman teaches a coin retaining apparatus comprising a receptacle/sensor configuration that is operated by performing the step of sensing the presence of coins at a selected height at any level within the receptacle (see Figure 6 and paragraph 0037) for the purpose of maintaining a registry of coins within said apparatus. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the receptacle/sensor configuration of Zimmerman into the coin dispensing apparatus of Ishida for the purpose of maintaining a registry of coins within said apparatus.

Response to Arguments

Applicant's arguments filed 18 April 2008 have been fully considered but they are not persuasive. Regarding claims 1, 3-8 and 10-12, despite the Applicant's arguments:

1) that the introduction of the mask of Grimmell is unobvious because there is no suggestion that the sensor of Zimmerman is not operable (see Applicant's arguments page 10, lines 11-15),

2) said Zimmerman sensor short circuits light between transmitter and receiver (page 10, lines 16-20), and

3) no mask is inherent in Zimmerman (page 11, lines 1-11),
the above-cited motivation (*i.e.*, that the combination would prevent unwanted light from distorting article detection signals produced by the sensor) renders said combination obvious to one of ordinary skill.

Regarding claim 2, contrary to the Applicant's argument that there is no suggestion to combine the photodiode transmitter and phototransistor receptors of Mothwurf with the processing apparatus of Zimmerman/Grimmell (page 12, line 18 through page 14, line 11), the transmitter/receptor means of Mothwurf is an effective coin detection means that would have been known to one of ordinary skill in the art. Thus, the above-cited suggestion to combine Mothwurf with Zimmerman/Grimmell is adequate to sustain the above rejection.

Regarding claim 9, despite the Applicant's argument that there is no suggestion to combine Zwieg with Zimmerman/Grimmell (page 14, line 12 through page 15, line

11), the use of high and low output voltages of Zwieg is a viable means of controlling coin processing machine that would have been obvious to one of ordinary skill in the art. Thus, the above-cited motivation to combine Zwieg with the apparatus of Zimmerman/Grimmell is adequate to sustain the above-cited rejection.

Regarding claim 13, the Applicant's argument that "[t]he Examiner has not established the level of ordinary skill in the art at the time of the invention" (page 15, lines 12 through page 16, line 7) is unpersuasive. All the above-cited reference pre-date the Applicant's claimed invention and would have been known to one of ordinary skill.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARK J. BEAUCHAINE whose telephone number is (571)272-6934. The examiner can normally be reached on 8:00AM through 5:00PM Mondays through Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick H. Mackey can be reached on (571)272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patrick H. Mackey/
Supervisory Patent Examiner, Art
Unit 3653

mjb